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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,678	01/15/2004	Kenny Randolph Parker	80002/US01	6078

7590 08/04/2006

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EXAMINER

BOYKIN, TERRESSA M

ART UNIT PAPER NUMBER

1711

DATE MAILED: 08/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/758,678	Applicant(s) PARKER ET AL.	
	Examiner Terressa M. Boykin	Art Unit 1711	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 June 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-51 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 1-15-4 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/06;3/06;6/06</u> | 6) <input type="checkbox"/> Other: _____  |

**Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1- 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over W0 97/17393; USP 3057909; or USP 4782181 as disclosed by applicants see NPL 6/9/06 and 1/17/06.**

Each of the references as disclosed in the disclosed NPL a process for production and/or the esterification of carboxylic acid beginning with a water wet cake of a carboxylic acid prepared from the same components as claimed by applicants except for specific vapor seal zone as disclosed herein.

It should be clearly noted by the applicants that the process must contain therein each and every step in the process in accord with the specification that will distinguish the process from that of the prior art. Applicants are not addressing the "broadness" of the claims. Note that a process should at least recite clear,, active steps and any process parameters necessitated by the specification so that the claim will "clearly set out and circumscribe a particular area with a reasonable degree of precision and particularity, In re Moore, 169 USPQ 236, and make it clear what subject matter the claim encompasses, as well as make clear the subject matter from others would be precluded. In re Hammack 166 USPQ 204.

In order to prosecute the case resourcefully and expediently while giving the

applicants the best possible search, *it is imperative and practical for the applicants* to clarify how the process differs from that of an esterification having a continuous process (.i.e. wherein there would exist a reactant containing water) and that from the further production of the polymer product. Applicants "water-wet" cake while defined in the lexicographer may interpret the art. Further, the recited "routing" is repugnant to scientific language, applicants must be specific.

Lastly, the recited "mixing zone" may be interpreted as the reacting zone for further polymerization wherein a polymer would be produced since the moieties would be present. Applicants must rewrite claims and be specific as to the exact process steps intended therein.

Each of the reference discloses that the process may vary according to the skilled artisan. It would have been obvious to one having ordinary skill in the art at the time the invention was made to produce the water wet cake as disclosed since the process is disclosed and the vapor seal zone could be envisaged by the skilled practitioner. Consequently, the claimed invention cannot be deemed as unobvious and accordingly is unpatentable.

#### **Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1- 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over USP 4892972 in view of Schaeffer.**

The reference discloses aqueous solutions of crude terephthalic acid are purified by hydrogenation in the presence of plural noble metal catalysts in separate layers. Initially, the solution to be purified is passed through a layer of ruthenium-on-carbon catalyst, rhodium-on-carbon catalyst, or platinum-on-carbon catalyst, and thereafter through a layer of palladium-on-carbon catalyst. Optionally, the purified aqueous terephthalic acid solution can be treated further to decrease the 4-carboxybenzaldehyde content thereof by passing it through a layer of rhodium-on-carbon catalyst downstream from the palladium-on-carbon catalyst layer.

The process is conducted at an elevated temperature and pressure in a fixed catalyst bed that is layered. Both down-flow and up-flow reactors can be used. The crude terephthalic acid to be purified is dissolved in water or a like polar solvent. Water is the preferred solvent; however, other suitable polar solvents are the relatively lower molecular weight alkyl carboxylic acids, alone or admixed with water.

Accordingly, the reference discloses a process for producing purified carboxylic acid/diol mixture which in the instant case is from crude terephthalic acid and to the catalyst system employed therein, and more particularly concerns a layered catalyst bed and its use in such purification. The crude terephthalic acid to be purified is dissolved in water or a like polar solvent which would inherently through the process steps would include a resulting water-wet cake. Thus, it would have been obvious to one having ordinary skill

in the art at the time the invention was made to produce the water wet cake as disclosed since the process of purifying the crude terephthalic acid is dissolved in water which would inherently result in a water-wet cake. Consequently, the claimed invention cannot be deemed as unobvious and accordingly is unpatentable.

**Provisional Obviousness-type Double Patenting**

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-51 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-77 of copending Application No. 10271058 or claims 1-35 of copending Application No. 11/076840 or claims 1-30 of copending Application No. 11/077481. Although the conflicting claims are not identical, they are not patentably distinct from each other

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because each of the process envisage a process for producing a carboxylic acid/diol mixture which, although not always specifically stated, according to each specification is, inherently, a water-wet cake wherein at least some of the water is removed.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### **Obviousness-type Double Patenting**

Claims 1-51 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims now allowed of U.S. application no. 10383126. Although the conflicting claims are not identical, they are not patentably distinct from each other because, as stated previously, both the application and the now the recently allowed application recite claims drawn to a process for producing a carboxylic acid/diol mixture which contains the same steps wherein there, inherently, exist a water-wet cake wherein water is removed .

### **Correspondence**

Please note that the cited U.S. patents and patent application publications are available for download via the Office's PAIR. As an alternate source, all U.S. patents and patent application publications are available on the USPTO web site ([www.uspto.gov](http://www.uspto.gov)), from the Office of Public Records and from commercial sources. Applicants may be referred to the Electronic Business Center (EBC) at <http://www.uspto.gov/ebc/index.html> or 1-866-217-9197.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Terressa Boykin whose telephone number is 571 272-1069. The examiner can normally be reached on Monday through Friday from 6:30am to 3:00pm.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. The general information number for listings of personnel is ( 571-272-1700).

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

tmb

  
Examiner Terressa Boykin  
Primary Examiner  
Art Unit 1711